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Keywords

COVID-19, Occupations, Tasks, Pakistan, Work from Home, Distance Learning

Disciplines

Health Economics | Inequality and Stratification | Labor Economics | Regional Economics | Work, Economy and Organizations

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In this article, we examine the feasibility of working and studying from home in Pakistan. We take advantage of the 2018–19 Pakistan Social and Living Standards Measurement (PSLM) Survey, released only weeks ago. PSLM is a nationally representative household survey with extensive information on employment outcomes, children's educational attainment, internet and TV access information, and hand-washing place. Following Dingel and Neiman [2020]'s approach, we define the feasibility of jobs that can be done from home for both urban and rural districts. We also investigate the possibilities for students to study from home via TV or internet. We find that only 10% of jobs in Pakistan can be done from home, and rates are even lower for rural residents, as so many of Pakistan's workers are in low-skill, low-paying service industries and cannot work from home. Our results also highlight the homeschooling challenges Pakistan's students face, given low rates of access to TV and the internet. Pre-existing inequalities in which many rural female students already lack educational opportunities will further compound these difficulties. Our results highlight the need for state's financial support for vulnerable workers and expanded internet access for both teaching and effective job performance.

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JEL Codes: D24, J22, R12, R23, I24, O53

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1 Introduction

COVID-19 poses heterogeneous global challenges. In many developing countries, disease containment and suppression through non-pharmaceutical interventions, such as lockdowns, have spurred massive layoffs and sustenance issues. Enforcing lockdowns leads to a paradoxical situation—it is essential to prevent the infection's spread and "flatten the curve," but those at the lower end of the income distribution will struggle to survive due to economic impacts. The absence of a social security mechanism to cover unemployment claims and the prevalence of informal workers in the economy makes COVID-19 management a daunting task for the state. Uncertainty is particularly acute for the education sector, as the highly contagious nature of the disease, even through asymptomatic carriers, limits the role of traditional learning institutions in the near future. The available policy space is extremely limited in countries that are already challenged with "messy and hidden" urbanization [Ellis and Roberts, 2016] and large rural populations where few people have access to internet and basic hand-washing facilities. Such constraints demand specifically designed and targeted policy interventions to mitigate economic and learning losses. As lockdowns seem inevitable and pervasive, the feasibility of working and studying from home needs to be analyzed thoroughly. Previous research focusing on the developed economies such as [Dingel and Neiman, 2020] indicates that the developed world has a high capacity for significant transition to home-based online options for work and education. However, we need to determine if this will work in developing countries..

The nature of jobs, possession of digital devices, internet access, and hygiene habits are some of the important factors we must analyze before home-based online options for work and education are workable for developing countries such as Pakistan which is the focus of this study. For example, due to occupational transformations linked with rapid urbanization, much of south Asia's expansion in service jobs has not been in high-value-added domains like information technology for whom online and remote work options are the norm, but in small-scale, non-tradeable services [Aparicio and Muzzini, 2013]. With extremely limited use of e-commerce platforms in Pakistan, such jobs often require on-site presence or face-to-face interaction; and, hence, they cannot be performed online. Apart from businesses, it seems nearly impossible to continue educational activities in the traditional way causing substantial loss of learning. This issue is compounded by the relatively low female enrollment at secondary and tertiary levels in rural regions and needs serious policy attention. Therefore investment in use of technology during the pandemic can be useful beyond this crisis to facilitate female learning in the long run.

In this article, we use Pakistan's 2018–19 Pakistan Social and Living Standards Measurement (PSLM) Survey data [Pakistan Bureau of Statistics, Government of Pakistan] to assess if technology can be used to jump the hurdles created by lockdowns in the business and the education sectors. PSLM is a nationally representative household survey with extensive information on employment outcomes, children's educational attainment, internet and TV access information, and hand-washing place; and the 2018-19 PSLM data is just released weeks ago. Analyzing occupational codes at 4-digit level and internet availability across rural and urban regions, we follow Dingel and Neiman [2020]'s approach to determine what percentage of Pakistan's labor force can ideally switch to online work and the constraints imposed by limited internet access. For the education sector, computer availability, internet access, and device sharing might have heterogeneous implications for students at elementary, secondary and tertiary schools across urban or rural residence and gender. We also examine the constraints of TV availability for students as Pakistan has recently advocated the use of dedicated TV channels for educational outreach.

Our article contributes to a growing literature that examines the impacts of COVID- 19 on workers due to their (in)ability to work from home. Most existing literature focuses on developed countries, such as the United States [Dingel and Neiman, 2020, Baker, 2020, Mongey and Weinberg, 2020, Bick and Blandin, 2020], Italy [Barbieri et al., 2020], the United Kingdom [United Kingdom Office for National Statistics, 2020], and Germany [Fadinger and Schymik, 2020]. These studies find that even in developed countries, less-educated workers, women, and those in occupations with more need for physical proximity are affected more [Mongey and Weinberg, 2020]. In particular, Mongey and Weinberg [2020] find that workers who cannot work from home are more likely to be non-white, lower-income, renters, less-educated, and lack employer-provided health insurance. Saltiel [2020] and Dingel and Neiman [2020] are the two exceptions to the best of our knowledge that provide information on the share of jobs that can be done from home in developing countries. The latter report, using employment numbers based on the 2-digit ISCO (international standard classification of occupations), that 13% of Pakistan's workers can do their job from home [Dingel and Neiman, 2020].

We enrich the literature by testing Dingel and Neiman [2020]'s findings and also by analyzing the impacts of the need to accomplish daily business online on Pakistan's stu- dents. Our results reveal that 12% of urban jobs and 9% of rural jobs can be done at home, which roughly aligns with the prior study's findings. Our examination of the impact on students

reveals substantial pre-existing inequalities in female students' opportunities to access primary and secondary education. Less than half of eligible female students enroll in primary schools, and this ratio drops to less than 30% for secondary and 20% for tertiary education. Even for students currently enrolled in schools, the proportion of households with access to TV and internet is very low, especially in rural Pakistan. All this suggests disproportionally larger pandemic impacts on students' abilities to study from home, especially those in socially disadvantaged households disadvantaged households.

2 Data and Methodology

We link household occupation and internet use information from the recently released PSLM survey with the national classification of occupations known as the the Pakistan Standard Classification of Occupations (PSCO) [Pakistan Bureau of Statistics, Government of Pakistan, 2015] to determine the impact of lockdowns and the number of tasks that can be switched online. Pakistan conducts PSLM surveys at the provincial level in alternating years, and data collection is based on stratified sampling of both urban and rural areas. Beyond occupation, income, and expenditure indicators, the survey gives detailed information on age-wise school enrollment, access and computer and internet use, as well as the hand-washing faclities in the households' dwellings.

We adapt the Dingel and Neiman [2020] approach to incorporate internet accessibility factor in our analysis. As Pakistan has enforced lockdowns that have disproportionately affected occupations in urban and rural areas, we consider it important to add regional variation in our analysis. We list all 410 occupations at the 4-digit level according to the Pakistan Standard Classification of Occupations (PSCO) and manually determine if they can be performed at home. When making our decision, we assume that some farm-related occupations especially marketing-related tasks can continue, as rural areas have fewer restrictions overall; however, schools and public transport are closed, affecting students and laborers everywhere. Next, we rank the 4-digit occupations on the basis of employment numbers and focus on the top 30 occupations. As those account for around 75% of employment in the country, we consider them to fairly represent the entire labor force. As a robustness check, we match occupation statistics with the most recent labor force survey to confirm the occupations' distribution validity. For the top 30 occupations, to determine the feasibility of working from home, we add information on the proportion of tasks that can be switched online by reviewing the complete list of routine tasks stated in the occupation description; and household-level internet availability. We also aggregate the 4 -digit occupation classification

to 2-digit sectors, based on the employment-weighted percent of tasks that can be performed at home, to analyze the within-sector heterogeneity across urban and rural jobs. Specifically, we use the 2-digit sector identification at the national and regional level to determine spatial distribution of jobs and internet access.

To examine the implications of lockdowns on the education sector, we divide the enrollment into primary (grades 1–5), secondary (grades 6–12), and tertiary (all undergraduate and graduate studies). We segregate urban, rural, and gender information in our analyses. Educational institutions across the country were the first to shut down and are likely to be the last to re-open. For the vast majority of students, these closures are indefinite, as only a very small proportion of students are enrolled in schools that have any online teaching capacity. Recognizing that Pakistan's federal government recently launched a dedicated TV channel to air educational material for grades 1–12, we include information about household TV ownership.

Lastly, we also analyze information about dedicated hand-washing place and household soap use in the households' dwellings to help understand readiness to work or study in the home. As health advisories strongly recommend hand washing to lower the chance of COVID-19 infection, we assume that households without a hand-washing area may find it difficult to follow health guidelines. Furthermore, the simple and relatively cheap intervention of providing public hand-washing areas may be beneficial for communities.

3 Results

Table 1 presents the percent of jobs that can be done from home as well as percent of workers with internet access at home for the top 30 occupations in Pakistan (ranked by number of workers employed), which collectively account for 75% of Pakistan's 48 million laborer workforce covered through the household survey. Of these 30 occupations, only workers in eight occupations could possibly work from home, as they are either unaffected by the lockdowns or could switch to working remotely. We also analyze the proportion of tasks against each of the 30 occupations to determine the extent of possible switch to online in the extreme situation where everyone is restricted to their homes. Table 1 shows a huge variation, with around 11%–90% task-switching possibility against nine occupations. In this list, three occupations (primary school teachers, secondary school teachers, and office clerks) clearly have a high percentage of switchable tasks (80%, assuming access to the internet). However, even in these three professions, the proportion of workers who have access to reliable internet is

only around 60%–70% in 2018–19. Furthermore, it is difficult to switch to a home-bound mode for many agricultural producers growing crops or raising livestock, which accounts for almost 40% of workers. Mixed crop growers or dairy producers could do some management and marketing tasks at home; however, over 70% of their production tasks are impossible to perform online. In addition, fewer than one-quarter have internet access.

When we aggregate the feasibility of working from home for all 410 occupations, we find that weighted on the percent of tasks doable from home, overall, 10% of Pakistan's jobs can be done from home, roughly comparable to Dingel and Neiman [2020]'s finding of 13%. We also find that urban Pakistani workers have more capability to work from home (12%) than do rural workers (9%).

Figure 1 depicts the geographical distribution of the employment-weighted measure of the share of Pakistan's urban and rural jobs that can be done at home, which reveals a significant variation across cities with the weighted average share ranging from 8% to 67%. Urban districts in northern Pakistan have a higher percent of jobs that can be performed at home than southern urban districts. However, only 51% of urban Pakistani households have internet access. Given 73% of rural Pakistani households have no internet access, those few who might be able to work remotely based on their jobs may not have the means. The three largest cities in Pakistan, Islamabad, Lahore, and Karachi, enjoy an average of 25%, 16%, and 18% of jobs that could be performed at home, respectively. In contrast, only 15% or fewer jobs in rural districts in the Sindh province could be done online from home. This finding highlights that rural regions will suffer more gravely from lockdowns and work-from-home orders than their urban counterparts. The scale of pre-existing inequalities in public service provisions leaves rural residents fewer options for setting up a home office and effectively working from home. Our result is consistent with previous findings that lower income groups in the United States have more difficulty being able to work from home [Mongey and Weinberg, 2020, Baker, 2020]. Figure 2 clearly highlights the district-level distribution of work from home feasibility as divided among rural and urban households. The right-skewed distribution in urban areas, as compared to the more normal distribution for rural households, indicates a regional divide. Figure 3 shows similar trends at the provincial level. The more urbanized provinces—Sindh and Punjab—have, on average, a high percent of jobs that can be done from home when compared to Balochistan and Khyber Pakhtunkhwa.

We aggregate the 410 4-digit occupations to 44 2-digit sectors to provide a picture of all occupations in Pakistan. To do so, we rely on the dichotomous categorization for each 4-

digit occupation with the top 30 occupations by employment (see Table 1). Table 2 presents the employment-weighting by percent of tasks that could be performed at home along with the percent of home internet connectivity information. Table 2 echoes the findings in Table 1—teaching professionals, business professionals, and some market-oriented skilled agricultural workers could work from home, but their abilities are severely limited by sub-optimal internet access. In addition, Table 2 also shows that many low-skill workers, including those in the food industry, drivers, and hospitality sector, simply cannot conduct their jobs effectively at home.

Table 3 separates workers in rural and urban districts, and presents the top and bottom ten occupations ranked by the share of jobs that could be performed at home. Interestingly, the top ten occupations, in terms of online-conversion ability, are identical for rural and urban districts. However, workers in urban areas enjoy better internet access and, thus, are more able to carry out these tasks at home. The gap between internet access and the absolute potential to work from home shows that teaching and business professionals could benefit from targeted resources to improve their online connectivity. In contrast, the bottom ten occupations are impossible to do from home, which shows an important rural-urban divide—agricultural, forestry, and fishery laborers are among the most affected in rural areas, while food processing and garment and related trade workers are most heavily affected in urban districts. Table 3 shows that many affected workers are providing low-paid services, including food processing, driving, mining and construction, waste collection, cleaning, and sales. This reveals urgent need for the government to divert resources, medical protective gear, and financial support to workers in these sectors.

Table 4 shows the impacts of COVID-19 on 54 million Pakistani students' abilities to study from home before and amid COVID-19. It reveals substantial gender inequalities in access to schooling. On average, only about 80% of school-aged girls in urban Pakistan go to primary or secondary schools, and that percentage drops to less than 40% in rural districts of the Balochistan province. The situation becomes even worse when we examine the gender ratios of students enrolled in tertiary education (colleges or post-graduate studies)—less than 10% of the tertiary students in rural Sindh province are women. Previous studies show that students affected by school closures due to weather or other exogenous causes do not do as well in exams, and are more likely to drop out [the Economist, 2020]. Pre-existing inequalities in terms of distance-learning equipment will only exacerbate the impact of COVID-19. Table 4 shows that even in urban Pakistan, only about one-half of households with primary-school-aged children have access to computers and internet, in contrast to 95% for developed

countries like Sweden. As part of the measures to compensate for academic loss in Pakistan, the government recently introduced a dedicated TV channel; however, only one-third or less of primary school students in the Khyber Pakhtunkhwa and Balochistan provinces have a TV in their home. A comparison between households with students currently in colleges or post-graduate studies and those with primary school children shows that more income and wealth are associated with better educational attainment for children. Finally, on average, households with a female student enrolled in school have higher probability of TV and internet access compared to households with a male student in the same cohort. This shows that wealthier and more resourceful households are more likely to value education for female children, and that girls and women left out of the public education system altogether are more likely to suffer even worse financial and economic consequences.

Finally, Table 5 shows households' outside work readiness by examining whether their dwellings have a hand-washing place or any kind of soap. Table 5 shows an overwhelming majority (88%) of households have soap or liquid soap at home; though only 72% of urban households and 34% of rural households have a hand-washing place at home. This will complicate their ability to return to work outside their homes and increases the likelihood of spreading the infection to entire household.

4 Conclusions and Policy Implications

The share of jobs that can be performed from home is an important determinant of economic performance and worker welfare during forced social distancing. Suppressing the COVID-19 outbreak through lockdowns adversely affects all occupations that traditionally require physical presence and a commute to work. However, a detailed review of the main tasks associated with any occupation helps in identifying the proportion of work that can be done from home or online. Although this proportion may not truly indicate the level of output, segregating jobs that can be largely shifted online from those that can not is useful to policy-makers designing interventions. Officials can use our findings to identify people who deserve more relief payments and the sectors that need urgent support for online transition. Our analysis shows that the major constraint on transitioning education—which would benefit students and teachers alike, as well as the overall economy—is internet access. As rural students generally have low internet and TV access rates, their loss of learning is larger. Our results also show that the impacts of COVID-19 are likely compounded by pre-existing inequalities in female students' access to education, especially at secondary and tertiary levels. Furthermore, simple and cheap health and hygiene interventions at workplaces or public

stations can improve Pakistan's ability to deal with the pandemic in case lockdowns are relaxed or schools are reopened.

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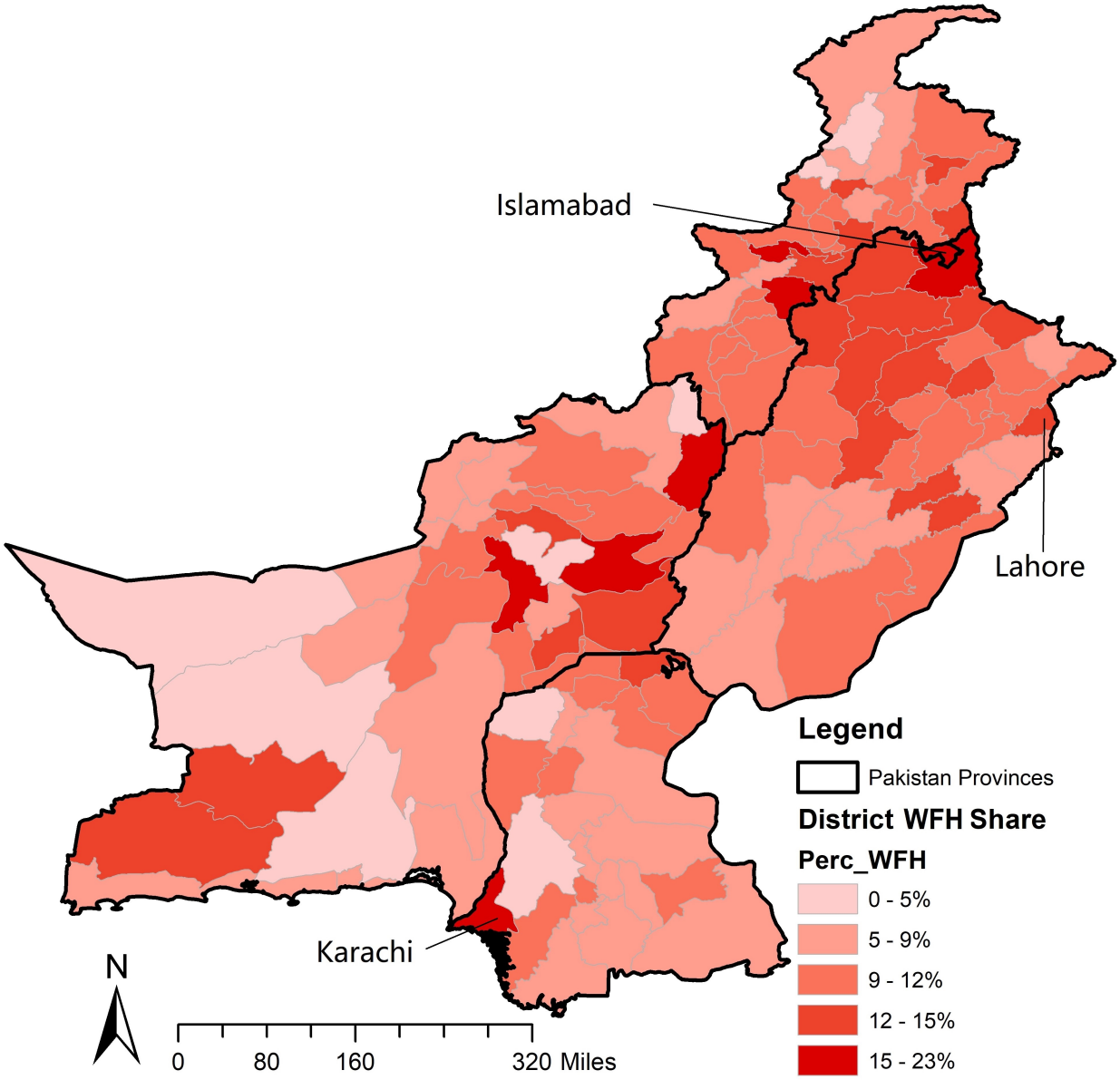
Table 1: Top 30 4-digit occupations in Pakistan by employment and workers' abilities to work from home, 2018–19

PSCO	Occupation description	Employment	Can work from home	% tasks switchable to online	% workers with internet
6130	Mixed crop and animal producers	7363321	Y	20%	23%
9313	Building construction laborers (bricklayer's assistant)	4851436	N	0%	15%
9211	Crop farm laborers (vegetable picker)	4534370	N	0%	8%
5221	Shopkeepers (grocer)	4125614	N	28%	49%
6121	Livestock and dairy producers (dairy farmer)	3582761	Y	15%	17%
6114	Mixed crop growers (skilled farmer)	2170272	Y	18%	16%
8322	Car, taxi, and van drivers (cab driver)	1953390	N	0%	38%
6330	Subsistence mixed crop and livestock farmers	1633260	Y	11%	22%
7531	Tailors, dressmakers, furriers, and hatters	1609803	N	0%	36%
5223	Shop sales assistants (salesperson)	1598114	N	0%	47%
7533	Sewing, embroidery, and related workers	1482006	N	0%	21%
6320	Subsistence livestock farmers	1348021	Y	0%	14%
9329	Manufacturing laborers not classified elsewhere	1214677	N	0%	21%
2341	Primary school teachers	1166808	Y	80%	66%
6310	Subsistence crop farmers (farm laborer)	1032974	N	0%	25%
6111	Field crop and vegetable growers	813794	Y	18%	22%
2330	Secondary education teachers	757999	Y	90%	77%
7231	Motor vehicle mechanics	693215	N	0%	36%
7111	House builders (construction project manager)	647078	N	0%	32%
7112	Bricklayers and related workers	616642	N	0%	9%
5414	Security guards	582919	N	0%	37%
9213	Mixed crop and livestock farm laborers	532071	N	0%	12%
9111	Domestic cleaners and helpers	529834	N	0%	23%
8321	Motorcycle drivers	519593	N	0%	27%
9333	Freight handlers	507025	N	0%	23%
9212	Livestock farm laborers	503484	N	0%	11%
5211	Stall and market salespersons (market vendor)	493577	N	0%	43%
8332	Heavy truck and lorry drivers	467273	N	0%	20%
4110	General office clerks	386757	N	87%	64%
9629	Elementary workers not classified elsewhere	380492	N	0%	24%

Figure 1: Share of jobs that could be done from home across Pakistan districts, 2018-19.



Note: Only four provinces of Pakistan are included in this Figure.

Table 2: Share of jobs that can be done at home and share of workers with internet in Pakistan by industry, 2018–19

OCC Code	Occupation description	Employment	% can work from home	% with internet
61	Market-oriented skilled agricultural workers	14337016	18%	20%
52	Sales workers	7509117	0%	46%
93	Mining, construction, manufacturing, and transport laborers	7175610	0%	17%
92	Agricultural, forestry, and fishery laborers	5769997	0%	9%
63	Subsistence farmers, fishers, and hunters and gatherers	4020797	8%	20%
75	Food processing, wood working, garment and other craft and related trades workers	3991577	0%	30%
83	Drivers and mobile plant operators	3362436	0%	32%
23	Teaching professionals	2295315	84%	71%
71	Building and related trades workers, excluding electricians	2080614	0%	27%
51	Personal services	1642331	0%	28%
72	Metal, machinery, and related trades workers	1458438	0%	38%
91	Cleaners and helpers	1022560	0%	29%
54	Protective services workers	996775	0%	43%
81	Stationary plant and machine operators	973819	0%	36%
96	Refuse workers and other elementary workers	818798	0%	30%
33	Business and administration associate professionals	765439	50%	70%
74	Electrical and electronic trades workers	738134	0%	50%
73	Handicraft and printing workers	617650	0%	36%
22	Health professionals	563735	2%	73%
41	General and keyboard clerks	531337	90%	67%
12	Administrative and commercial managers	366778	1%	88%
26	Legal, social, and cultural professionals	357386	81%	56%
14	Hospitality, retail, and other services managers	348200	10%	56%
32	Health associate professionals	336780	3%	65%
34	Legal, social, cultural, and related associate professionals	325905	0%	42%
13	Production and specialised services managers	312534	2%	77%
43	Numerical and material recording clerks	298524	22%	64%

Table 2, continued

OCC Code	Occupation description	Employment	% can work from home	% with internet
31	Science and engineering associate professionals	262347	46%	66%
24	Business and administration professionals	248268	87%	87%
42	Customer service clerks	224372	0%	73%
11	Chief executives, senior officials, and legislators	164534	92%	91%
44	Other clerical support workers	158841	18%	53%
21	Science and engineering professionals	146508	0%	79%
3	Armed forces occupations, other ranks	141214	0%	47%
62	Market-oriented skilled forestry, fishery, and hunting workers	117000	0%	25%
25	Software and applications developers and analysts	109434	100%	82%
95	Street and related sales and service workers	90461	0%	25%
94	Food preparation assistants	82114	0%	45%
53	Personal care workers	80082	22%	28%
35	Information and communications technicians	66722	28%	86%
82	Assemblers	40488	0%	54%
2	Non-commissioned armed forces officers	21183	0%	76%
1	Commissioned armed forces officers	3243	0%	67%

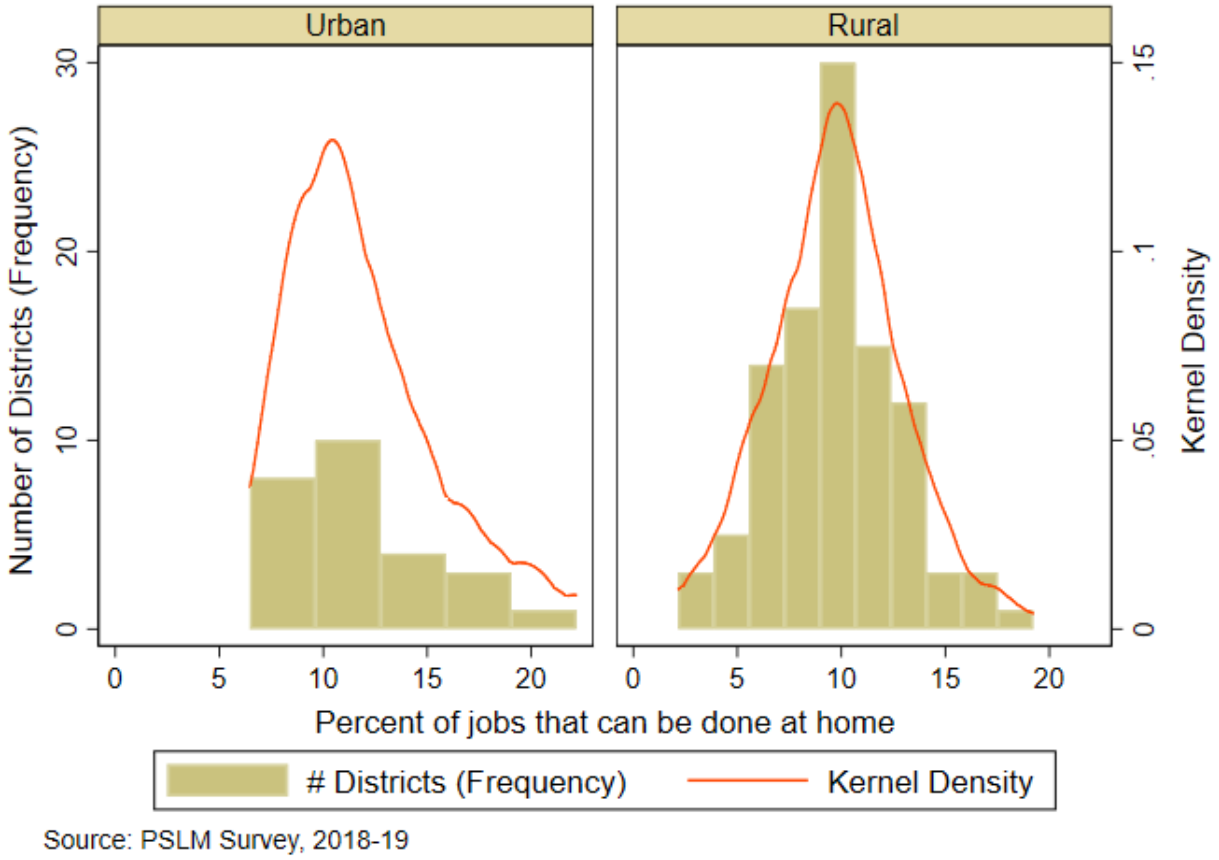
Table 3: Top and bottom ten urban and rural occupations that can be done at home in Pakistan by industry, 2018–19

Region	OCC Code	Occupation description	Employment	Rank	% can work from home	% with internet
Top ten urban and rural occupations that could be done from home						
Rural	25	Software and applications developers and analysts	20736	39	100%	67%
Rural	41	General and keyboard clerks	156253	22	90%	53%
Rural	11	Chief executives, senior officials, and legislators	35110	35	89%	81%
Rural	23	Teaching professionals	1091471	9	84%	62%
Rural	24	Business and administration professionals	49821	33	82%	65%
Rural	12	Administrative and commercial managers	58237	32	81%	69%
Rural	33	Business and administration associate professionals	243874	18	46%	57%
Rural	43	Numerical and material recording clerks	96439	26	42%	54%
Rural	13	Production and specialised services managers	102153	25	29%	67%
Rural	61	Market-oriented skilled agricultural workers	13389849	1	18%	19%
Urban	25	Software and applications developers and analysts	88699	34	100%	86%
Urban	11	Chief executives, senior officials, and legislators	129424	31	92%	95%
Urban	41	General and keyboard clerks	375084	17	90%	74%
Urban	24	Business and administration professionals	198447	25	87%	92%
Urban	23	Teaching professionals	1203843	5	85%	79%
Urban	12	Administrative and commercial managers	308541	20	81%	93%
Urban	33	Business and administration associate professionals	521565	11	52%	76%
Urban	43	Numerical and material recording clerks	202086	24	48%	70%
Urban	35	Information and communications technicians	45948	39	28%	88%
Urban	53	Personal care workers	46794	38	25%	40%

Table 3, continued

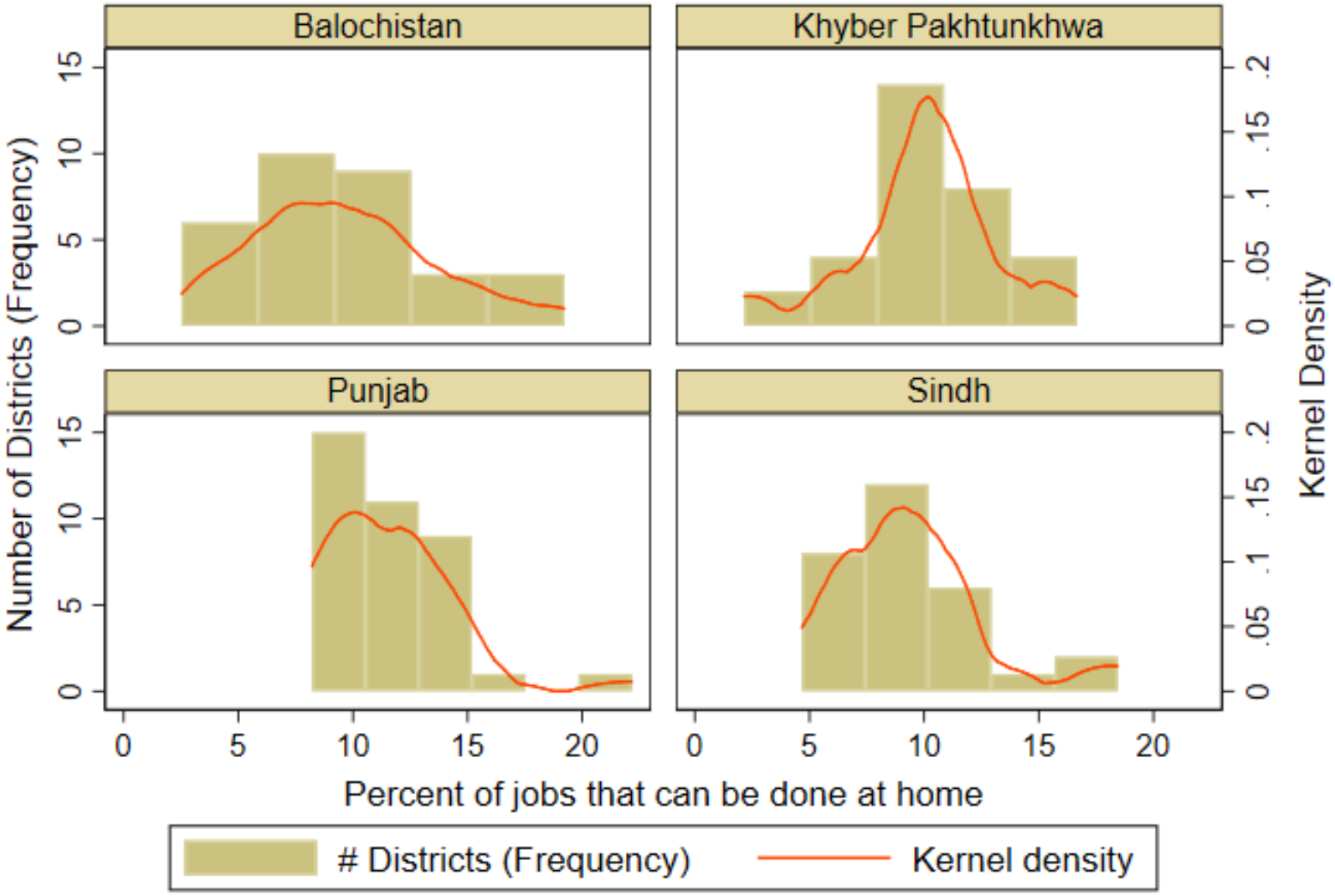
Region	OCC Code	Occupation description	Employment	Rank	% can work from home	% with internet
Bottom ten urban and rural occupations that could be done from home						
Rural	83	Drivers and mobile plant operators	1954524	6	0%	26%
Rural	73	Handicraft and printing workers	271911	17	0%	24%
Rural	71	Building and related trades workers, excluding electricians	1304688	8	0%	23%
Rural	91	Cleaners and helpers	414298	14	0%	22%
Rural	51	Personal services	845775	10	0%	21%
Rural	75	Food processing, wood working, garment, and other craft and related trades workers	1873453	7	0%	20%
Rural	96	Refuse workers and other elementary workers	309809	16	0%	19%
Rural	82	Assemblers	6246	42	0%	14%
Rural	93	Mining, construction, manufacturing, and transportation laborers	5187252	3	0%	14%
Rural	92	Agricultural, forestry and fishery laborers	5373176	2	0%	9%
Urban	83	Drivers and mobile plant operators	1407912	4	0%	42%
Urban	75	Food processing, wood working, garment, and other craft and related trades workers	2118124	2	0%	40%
Urban	96	Refuse workers and other elementary workers	508990	13	0%	37%
Urban	51	Personal services	796556	8	0%	36%
Urban	71	Building and related trades workers, excluding electricians	775926	9	0%	35%
Urban	91	Cleaners and helpers	608262	10	0%	35%
Urban	93	Mining, construction, manufacturing, and transportation laborers	1988358	3	0%	25%
Urban	62	Market-oriented skilled forestry, fishery and hunting workers	43302	40	0%	22%
Urban	95	Street and related sales and service workers	56471	36	0%	19%
Urban	92	Agricultural, forestry, and fishery laborers	396821	16	0%	12%

Figure 2: Distribution of work-from-home feasibility shares across urban and rural Pakistani districts, 2018-19.



Source: PSLM Survey, 2018-19

Figure 3: Distribution of work-from-home feasibility shares across four Pakistani provinces, 2018-19.



Source: PSLM Survey 2018-19

Table 4: Percent of male and female students with home access to TV and internet in Pakistan, 2018–19

Province	Region	Education level	Male students			Female students		
			# of students	TV	Internet	# of students	TV	Internet
Khyber Pakhtunkhwa	Rural	Primary	25881	20%	31%	14809	26%	36%
Khyber Pakhtunkhwa	Rural	Secondary	18800	28%	42%	4420	42%	47%
Khyber Pakhtunkhwa	Rural	Tertiary	636	39%	78%	150	73%	84%
Khyber Pakhtunkhwa	Urban	Primary	3377	47%	52%	2547	49%	54%
Khyber Pakhtunkhwa	Urban	Secondary	2731	52%	61%	1256	54%	62%
Khyber Pakhtunkhwa	Urban	Tertiary	216	53%	87%	98	63%	91%
Punjab	Rural	Primary	36841	57%	21%	29751	60%	22%
Punjab	Rural	Secondary	19266	64%	32%	15812	68%	35%
Punjab	Rural	Tertiary	438	63%	71%	636	78%	64%
Punjab	Urban	Primary	14034	71%	40%	12034	71%	44%
Punjab	Urban	Secondary	11080	73%	58%	12211	76%	52%
Punjab	Urban	Tertiary	1019	69%	86%	1527	66%	81%
Sindh	Rural	Primary	13448	36%	20%	5320	50%	23%
Sindh	Rural	Secondary	4075	56%	36%	930	77%	45%
Sindh	Rural	Tertiary	162	75%	81%	11	91%	91%
Sindh	Urban	Primary	8730	72%	47%	6778	72%	51%
Sindh	Urban	Secondary	7276	70%	64%	4485	73%	66%
Sindh	Urban	Tertiary	682	49%	95%	365	62%	97%
Balochistan	Rural	Primary	5441	27%	17%	1987	36%	23%
Balochistan	Rural	Secondary	2781	39%	30%	832	61%	30%
Balochistan	Rural	Tertiary	66	45%	59%	11	29%	86%
Balochistan	Urban	Primary	2016	56%	32%	873	63%	31%
Balochistan	Urban	Secondary	1071	67%	45%	470	77%	49%
Balochistan	Urban	Tertiary	75	80%	76%	22	68%	74%

Note: The number of students are in thousands.

Table 5: Outside work readiness of household dwellings in urban and rural Pakistan, 2018–19

Region	Outside work readiness - Has hand washing place at home	Outside work readiness - Has soap or liquid soap at home
Pakistan	47%	88%
Urban	72%	95%
Rural	34%	84%